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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

SMITH, NICHOLAS A

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/711,419	Applicant(s) EYAL, OMER C.	
	Examiner NICHOLAS A. SMITH	Art Unit 1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 April 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) 1-10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-24 is/are rejected.
- 7) ☒ Claim(s) 18-22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9/17/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Claims 1-10 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 15 April 2008.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
2. Claims 13 and 17-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
3. Claims 13, 17 and 18 recite the limitation "said actuator means". There is insufficient antecedent basis for this limitation in the claim. Claim 11 does not include any recitation of "actuator means". Claim 12 does, but claims 13 and 17-22 do not depend from claim 12.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –
5. Claims 11-12, 17 and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Hirota et al. (US 20010004962 A1).

6. In regards to claim(s) 11-12, 17 and 23, Hirota et al. discloses a method of cleaning a chlorine generator, providing an electrolytic chamber with an inlet and an outlet, pumping water from a pool, positioning a plurality of plates in electrolytic chamber, positioning a hopper of hydrochloric acid in selective fluid communication with said electrolytic chamber via a one-way valve, and automatically controlling flow of the hydrochloric acid while the circulation pump is not operating and not allowing flow of hydrochloric acid while circulation pump is not operating, employing a timer to automate maintenance and also a pH sensor to effect operation of the chlorine generator (Figure 7, Figure 30, paragraphs [0082], [0087]-[0091], [0194]-[0199] and [0318]-[0344]).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirota et al.

9. In regards to claim(s) 13, Hirota et al. does not explicitly disclose a flow-sensing means with an adapted signal to actuate the valve that allows pH-reducing agent to flow into the electrolytic chamber. However, Hirota et al. does have a control system that is interconnected to a flow valve that stops flow from the circulation pump to the electrolytic chamber and then opens the valve that allows pH-reducing agent to clean the electrolytic cell. It is noted that Hirota et al.'s flow valve in the off position is

effectively the same control element as the flow switch with flow-sensing means indicating no flow from the circulation pump.

10. Hirota et al. discloses a flow sensing means (paragraph [0349], Fig. 30) that measures flow rate and closes a valve and turns off the electrolyzer in low flow conditions. It would have been obvious to one of ordinary skill in the art to modify Hirota et al.'s control system to have a flow sensor upstream of the electrolyzer in order to turn off the electrolyzer in low flow conditions (Hirota et al., paragraph [0349], Fig. 30), thus effectively performing the same function as the flow valve closing in order to perform maintenance.

11. In regards to claim(s) 14, Hirota et al. discloses an inlet below the electrolyzer (paragraph [0210]), but does not explicitly disclose a check valve in the claimed location, but just a valve.

12. Hirota et al. discloses a check valve upstream of the electrolyzer to prevent back flow (paragraph [0256]). It would have been obvious to one of ordinary skill in the art to substitute Hirota et al.'s valve with Hirota et al.'s check valve in order to prevent back flow (Hirota et al., paragraph [0256]).

13. Claims 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirota et al. in view of Lee (US 5746904 A) and in further view of Sweeney (US 4596648 A).

14. In regards to claim(s) 15, Hirota et al. discloses that the rate of pH-reducing agent can be controlled by a drop-regulating chamber (i.e., a pump, P32, Fig. 30, paragraphs [0315]-[0344]) and deliver at a preselected rate, but does not specifically

describe a drop-by-drop rate. However, Hirota et al.'s pump is capable of a whole range of flow rates and it would have been obvious to choose a drop-by-drop rate because Hirota et al. teaches the same utility for all rates. See MPEP 2144.05.

15. In regards to the claimed S - shape, Hirota et al. does not explicitly disclose such a shape.

16. Lee pertains to electrolytic water treatment and discloses the claimed S-shape (abstract, Fig. 6). It would have been obvious to one of ordinary skill in the art to modify Hirota et al.'s method with Lee's S-shaped flow method in order to form a substantially one-way flow path (Lee, abstract).

17. Hirota et al. in view of Lee does not explicitly disclose an inlet at the top of the electrolytic chamber or a vacuum breaker near the inlet.

18. Sweeney pertains to electrolytic gas generators wherein the inlet is located at the top of the electrolytic chamber as well as a vacuum-breaker (col. 6, lines 29-65, Figure 1). It would have been obvious to one of ordinary skill in the art to modify Hirota et al. in view of Lee's inlet with Sweeney's inlet and vacuum-breaker because Sweeney teaches that such an inlet is effective for delivering electrolytic to the chamber and the vacuum-breaker helps equalize pressure (Sweeney, col. 6, lines 29-65).

19. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hirota et al. in view of Bradley (US 6112754 A).

20. Hirota et al. discloses a tank reservoir for pH-reducing agent with an open top, but does not teach the claimed lids with apertures.

21. Bradley discloses a cleaning tank with that has lids with aperture and is designed to prevent splashing from out of the container (col. 7, lines 23-54). It would have been obvious to one of ordinary skill in the art to modify Hirota et al.'s method with Bradley's lids with apertures in order to prevent splashing (Bradley, col. 7, lines 23-54).

Furthermore, it would have been obvious to add a second lid for the same reason as adding the first lid, and the apertures would not line up in most configurations therefore meeting the claims.

Allowable Subject Matter

22. Claims 18-22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims and to overcome the rejection under 35 U.S.C. 112, second paragraph above.

23. The following is a statement of reasons for the indication of allowable subject matter: In regards to claim(s) 18-22, prior art does not teach, suggest or disclose a method wherein the pH-reducing agent in said electrolytic chamber is introduced into said body of water when said circulation pump is activated in the claimed combination. Hirota et al. teaches that the pH-reducing agent is flushing out of the electrolytic cell and not towards the main body of water, and therefore teaches away from the claimed invention.

Conclusion

24. Any inquiry concerning this communication or earlier communications from the examiner should be directed to NICHOLAS A. SMITH whose telephone number is

(571)272-8760. The examiner can normally be reached on 8:30 AM to 5:00 PM, Monday through Friday.

25. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Susy Tsang-Foster can be reached on (571)-272-1293. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

26. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Harry D Wilkins, III/
Primary Examiner, Art Unit 1795

NAS